

CLAIMS

Claim 1. (Currently Amended) A strain of a micro-organism comprising NADPH-oxidizing activity that is ~~limited~~ reduced by a deletion of at least one gene coding for an enzyme selected from the group consisting of a quinone oxidoreductase ~~or~~ and a soluble transhydrogenase, and wherein said strain has undergone a modification that enhances at least one NADP⁺-reducing enzyme activity of said strain by a deletion of at least one gene coding for an enzyme selected from the group consisting of a phosphoglucose isomerase ~~or~~ and a phosphofructokinase.

Claim 2-4. (Cancelled)

Claim 5. (Currently Amended) A strain according to Claim 1, wherein said strain ~~has undergone~~ further comprises a modification of at least one gene coding for ~~at least one of an enzyme~~ selected from the group consisting of a dihydrolipoamide dehydrogenase and a glyceraldehyde 3-phosphate dehydrogenase.

Claim 6. (Currently Amended) A strain according to Claim 1, wherein said strain further comprises ~~overexpresses overexpression of~~ at least one gene coding for an enzyme selected from the group consisting of a glucose 6-phosphate dehydrogenase, a 6-phosphogluconolactonase, a 6-phosphogluconate dehydrogenase, an isocitrate dehydrogenase, ~~or~~ and a membrane-bound transhydrogenase.

Claim 7. (Currently Amended) A strain according to Claim 1, wherein said strain ~~has undergone~~ further comprises a modification of at least one gene coding for an enzyme selected from the group consisting of a 6-phosphogluconate dehydratase, a malate synthase, an isocitrate lyase, ~~or~~ and an isocitrate dehydrogenase kinase/phosphatase.

Claim 8. (Currently Amended) A strain according to Claim 1, wherein said strain further comprises at least one endogenous or exogenous gene coding for an enzyme involved in the biotransformation of a substance of interest.

Claim 9. (Currently Amended) A strain according to Claim 1, wherein said strain further comprises at least one selection marker gene.

Claim 10. (Previously Presented) A strain according to Claim 1, wherein said strain is selected from the group consisting of *Aspergillus sp.*, *Bacillus sp.*, *Brevibacterium sp.*, *Clostridium sp.*, *Corynebacterium sp.*, *Escherichia sp.*, *Gluconobacter sp.*, *Penicillium sp.*, *Pichia sp.*, *Pseudomonas sp.*, *Rhodococcus sp.*, *Saccharomyces sp.*, *Streptomyces sp.*, *Xanthomonas sp.* and *Candida sp.*

Claim 11. (Currently Amended) A method for the preparation of the strain of Claim 1 comprising:

(a) deleting at least one gene coding for an enzyme selected from the group consisting of a quinone oxidoreductase ~~or~~ and a soluble transhydrogenase, and

(b) deleting at least one gene coding for an enzyme selected from the group consisting of a phosphoglucose isomerase, a phosphofructokinase, a 6-phosphogluconate dehydratase, a malate synthase, an isocitrate lyase ~~or~~ and an isocitrate dehydrogenase kinase/phosphatase, and

(c) optionally modifying at least one gene coding for an enzyme selected from the group consisting of at least one of a dihydrolipoamide dehydrogenase and a glyceraldehyde 3-phosphate dehydrogenase, and

(d) optionally overexpressing at least one gene coding for an enzyme selected from the group consisting of a glucose 6-phosphate dehydrogenase, a 6-phosphogluconolactonase, a 6-phosphogluconate dehydrogenase, an isocitrate dehydrogenase, ~~or~~ and a membrane transhydrogenase.

12. (Previously Presented) A method for the production of a substance of interest formed by a biosynthesis route of which at least one step is NADPH-dependent comprising:

- a) growing micro-organisms of the strain of Claim 1 in an appropriate culture medium that favours their growth and contains substances necessary for carrying out biotransformations by fermentation or bioconversion, except NADPH; and
- b) extracting a substance of interest from the medium and optionally purifying said substance.

13. (Currently Amended) The method according to Claim 12, wherein said ~~characterized in that the~~ substance of interest is an amino acid, or a vitamin, or a sterol, or a flavonoid, or a fatty acid, or an organic acid, or a polyol or a hydroxyester.

14. (Previously Presented) The method according to claim 13, wherein said substance of interest is an amino acid.

15. (Currently Amended) A strain according to claim 1, wherein said NADPH-oxidizing activity is ~~limited~~ reduced by a deletion of at least one gene coding for a quinone oxidoreductase and at least one gene coding for a soluble transhydrogenase.

16. (Currently Amended) A strain according to claim 1, wherein said strain has undergone a modification that enhances at least one NADP⁺-reducing enzyme activity of said strain by a deletion of at least one gene coding for a phosphoglucose isomerase and at least one gene coding for a phosphofructokinase.